

Received November 28, 1769.

XII. *A Letter from Mr. Thomas Woolcomb, Surgeon, to the late Doctor Huxham, F. R. S. on the Case of a Boy, who died of a Gun shot Wound, and communicated by the Rev. J. Cor. Huxham, A. M. F. R. S.*

S I R,

Read March 1, 1770. **I** TAKE the liberty of troubling you with the following remarkable case in surgery, which, some months since, fell under my inspection, as I judge it will not be wholly unacceptable to a person so eminent for his abilities in the medical art, and so distinguished for a nice discernment into, and investigation of, the more remote causes of morbid appearances; a few of which, that occurred in the present case, seem not a little unaccountable.

Dec. 17th, 1763, in the forenoon, I was sent for to the assistance of John Kitt, a lad of about 15 years of age, who had just received a considerable wound by the unexpected going off of a gun loaded with small shot, held near his arm. I found the shot, by being so near, had acted altogether as a slug, had lacerated much, and made a pretty large perforation

foration through the *biceps* and *brachiiæus internus* muscles, had bared the *os humeri*, and in fine penetrated quite through the arm from below upwards.

By the time I arrived (which was almost immediately after the accident) I found little or no hæmorrhage, which made me hope the humeral artery had not been divided. On examining the wound, and finding no extraneous substances lodged, but the passage quite pervious to the probe; I dressed up with dry lint, digestive, &c. ordering moreover the whole limb to be wrapped up in a warm poultice made with oatmeal, stale beer, and a good deal of oil. Returning in the evening, I found the patient tolerably easy, but applying my fingers to the artery of the wrist of the same hand, was not a little alarmed to find I could perceive not the least pulsation. It was but too easy to apprehend the cause of it; that in all probability the artery was divided, and if so, the limb perhaps would not be saved.

I made my relation to the friends accordingly. However, as no threatening symptoms attended, I was willing to see, whether, if the artery was divided, the blood might not, as after the operation of the aneurism, find a passage by the collateral branches, and thereby the circulation be kept up. I was apt also to think, as there had been no hæmorrhage at the wound, that it might not be divided, but the course of the circulation be impeded only by some spasmodic constriction, which possibly by the morning might relax and give way; at all events, I judged it most prudent to wait. I dressed up therefore with a little warm digestive, after proper fomenting the limb, and ordered the cataplain to be renewed

as before. Little or no tension had yet taken place; nevertheless, in order to obviate that, and the symptomatic fever that might be expected, and finding withal the pulse began to rise, I ordered him to be bled about  $\frac{1}{2}$  xvj, and left him with a tourniquet put loosely round the arm, with proper directions to the attendants, for fear of any sudden rupture of the blood-vessel in the night.

The next morning I found him tolerably easy, but the pulse very quick and strong, and still no pulsation in the wrist of the wounded arm. The aspect of the wound very good, no tension round. However, as it was so nice a point to determine, whether the artery was or was not divided, and of consequence whether it would be more prudent, on the supposition it was, to proceed to amputation, or any longer run the risk of a mortification's ensuing; I judged it proper to have other opinions, and for that purpose, called in three surgeons of credit in the town.

They were all of opinion, as there were no imminent symptoms, it was best still to wait; judging rightly, that, if a mortification took place only through defect of the blood's circulation in the lower limb, it might easily be remedied by amputation above, time enough when it first made its appearance. We accordingly dressed up in the same manner, but had the patient bled again to  $\frac{1}{2}$  x or  $\frac{1}{2}$  xii, and gave a gentle lenitive, which procured a few stools. In the evening, symptoms were much the same; pulse still strong and quick: bleeding was therefore repeated.

The next day every thing seemed to take a favourable turn, the pulse grew much more calm a  
good

good digestion came on, no tension at all was observed on the limb, and in this kindly manner we went on for three or four days. Though all this time not the least pulsation could be felt on the wounded limb, there was always a kindly natural warmth on it, and the patient made no other complaint than of a numbness and deadness of his little and ring-finger.

By all these favourable circumstances I was induced to hope all danger had now been over, when about the fifth or sixth day from the accident, the appearance of the wound began to alter, and to look of a pale leucophlegmatic hue; the discharge became much more thin and serous, and very considerable *fungi* grew out from the surface of each wound; the whole limb both above and below the wound became greatly enlarged, the hand and fore-arm perfectly œdematous; the pulse quick and small, the countenance, from a fresh florid hue, sunk, pale and fallow.

These alarming symptoms coming on gave me the greatest reason to be apprehensive of the event. To obviate them as much as possible, I ordered the *cortex* both in decoction and substance to be administered every hour or two, and had fresh consultations with the other surgeons. It was not now practicable to amputate, as the distension of the limb extended quite to the *axilla*. We therefore continued the use of the *fotus*, warm dressings, &c. as before; strewing over the *fungi* well with the *pulv. angel.* Notwithstanding which, they continued to sprout to a great height, and, though I pared away at every dressing all the dead surface with the knife, they baffled all endeavours to suppress them.

In this manner it continued to go on till the first of January, in the afternoon of which the man began to complain greatly of being cold; and, notwithstanding the warmest and most invigorating medicines were given, he grew more and more so, till about eleven or twelve, when he expired. Neither before or after death was there the least appearance of a mortification having taken place.

However, in order, if possible to investigate the true cause of his death, and to satisfy ourselves whether the artery was or was not divided, in the presence of the other surgeons, I laid open the wounded parts, and passing a probe through the artery at a transverse incision made above the wound, carefully dissected away the surrounding integuments, and thereby discovered a perforation (about the bigness of a small pea) made through the coats of one side of the artery.

We were all at a loss to account, why there never ensued any hæmorrhage from so considerable a vessel's being opened, as no eschar could well have formed, nor yet appeared there any constriction or compression; and yet it appeared as plain, that the course of the blood was thoroughly intercepted in that vessel, by there never being the least pulsation at the wrist after the accident.

The cause of his death too at last seems to be pretty unaccountable, as no mortification ensued, which one would have expected to have been the natural consequence of the blood's being so intercepted. If owing to the shock given the constitution, or *remora* to the circulation, should not one have expected the ill consequences would have been felt

felt sooner? whereas, for nearly the first week, no patient with so considerable a wound could go on better, no wound could have a better aspect, or digest better.

By the repeated bleeding, lenient cathartics, and proper topical relaxing applications, all degree of tension was happily kept off, little or no symptomatic fever attended, and seemingly every ill symptom was obviated. In what manner then shall we conclude death at last to have been brought about so long after, since he neither sunk under discharge from the wound, had no fever or convulsion, and no mortification ever appeared? and what shall we assign to be the true reason of no hæmorrhage ensuing, since there was so manifest an aperture through the coats of the artery? This I must confess myself wholly at a loss to account for, and beg leave to submit to your superior judgment. I have laid before you a tedious indeed, but very exact and true state of the case, and am, with great respect,

S I R,

Your most obedient

humble servant,

Tho. Woolcombe.

Plymouth, 25 June,  
1764.